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(54) SPEECH TRANSMISSION DEVICE OF COUNTER TERMINAL

(57)Abstract:

PURPOSE: To improve the operability so that smooth counter terminal operation can be done.

CONSTITUTION: In respective fields on a transaction screen displayed on a display 12, an input check part 1 checks input data according to the movement of a cursor. For example, the cursor is stopped from moving for essential input data until an operator inputs the data. In this case, the data needs to be inputted to the file indicated currently with the cursor with the speech of a speech information transmission part 4, so a message noticing the stop of the movement of the cursor is outputted. Further, when input to all the digits in the figure is needed, the cursor is similarly stopped from moving and a message noticing that is vocalized. Other input checks are the same. After all data are inputted normally, a transaction check pat 2 checks whether or not a transaction can normally be performed and if an error is found, a vocal message is outputted similarly to the input check.
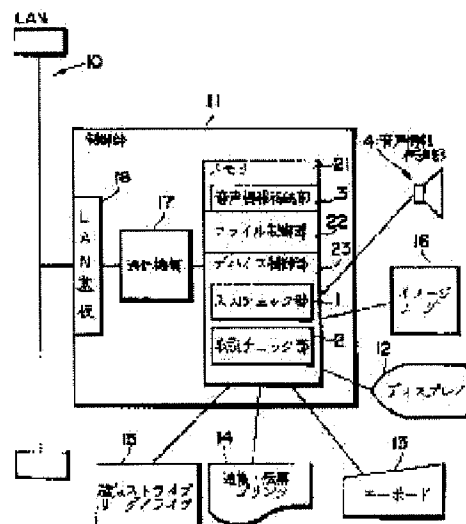
* NOTICES *

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Industrial Application]This invention relates to the transmission-of-sound device of the window terminal installed in financial institutions, such as a bank, etc.
[0002]
[Description of the Prior Art]The terminal unit installed in windows, such as financial institutions, such as a bank, mainly processes calculation system business, such as deposit, a money order, and a loan. In this kind of device, the operator which is a bank clerk etc. inputs required data into the transaction picture on a display from a keyboard. Whenever it performs such alter operation, a check is performed to the inputted data. Such checks are an input indispensable check, a total beam input check, a correlation check of data, etc., and differ for every transaction picture. As a result of such a check, when alter operation is not suitable, even if cursor is not moved to the next field or it presses the input completion key, measures, such as repealing the depression, are taken.
[0003]Checks other than the check of input data are also performed at the time of the depression of an input completion key. For example, they are a check of an operator card, a check of the operational mode of a terminal, etc. If there is an error as a result of this check, an error message will be displayed on the transaction picture on a display. If there is no error in the result of each above check, wording of a telegram will be transmitted to the host computer which is an upper device, but when the error on dealings, etc. arise with a host computer, a message is added to a reply telegraphic message. And in window terminal equipment, this message is displayed on the transaction picture on a display (for example, refer to the Oki Electric research and development, No. 127, Vol.52, No.3, and pp 25-30).
[0004]
[Problem(s) to be Solved by the Invention]However, following SUBJECT was among the Prior arts mentioned above. That is, also in which stage of the operation mentioned above, since the contents of the error are displayed only with the transaction picture on a display to an operator, the contents may be indefinite for an operator. For example, when you cannot perform dealings at the time of cursor not moving to the next field, or the time of the depression of an input completion key, the operator could not understand the cause but refer to the operations manual etc. for it. Wording of the error message displayed on a display may not be enough on restrictions of a viewing area, and refer to the operations manual etc. for an operator also in this case. Since the transaction picture on a display had little information for showing around so that an operator can perform right operation, conventional window terminal equipment did not have so good for it operativity. It was not easy to perform smooth window terminal business in a financial institution etc. by the cause of a more than.
[0005]
[Means for Solving the Problem]A transmission-of-sound device of a window terminal of this invention is characterized by the following points in order to solve SUBJECT mentioned above.
(1)
** Data inputted from an input device of a window terminal is checked, and it has an input check

part which chooses speech information corresponding to the result.
** Trading conditions including the contents of record of an operator card are checked, and it has a dealings check part which chooses speech information corresponding to the checked result.
** It has a speech information storage which stored speech information chosen by an input check part and dealings check part.
** It has a speech-information-transfer part which changes into a sound speech information stored in the speech information storage concerned as a message to a window terminal, and transmits it.
[0006]In (2) and (1), a speech-information-transfer part changes into a sound a message added to wording of a telegram transmitted from an upper device, and transmits it.
[0007]
[Function]
(1) In window terminal equipment, operators, such as a bank clerk, insert in a device the operator card which self possesses, and start transaction operation according to a customer's request. In this operation, the transaction picture according to a transaction content is displayed first. And required data is inputted one by one, moving cursor to each field in a transaction picture. In each field, the check of input data is performed according to movement of cursor. For example, in indispensable input data, movement of cursor is prevented until an operator inputs data. In this case, since the entry of data of the field to which cursor is pointing in this time through the sound outputted from a speech-information-transfer part is indispensable, the message of the notice of a purport which suspends movement of cursor is made. As a result, an operator grasps the operation situation of a device exactly and can perform suitable operation, without referring to a manual etc. Also when the input of all the beams in the field is required, while suspending movement of cursor similarly, the message of that a notice is made by the sound. Other input checks are also the same. After all the data is inputted normally, it confirms whether it can trade normally by a dealings check part, and if it is an error, the message with a sound will be performed like an input check.
[0008]In (2) and (1), the host computer which is an upper device decides to add a voice message to the wording of a telegram of the reply as a result of dealings, and to transmit to window terminal equipment to the wording of a telegram transmitted from window terminal equipment. And the speech-information-transfer part of window terminal equipment changes this message into a sound, and transmits it to an operator. As a result, since the contents of the error message when dealings are not normally conducted with a host computer are not limited only to the display of a screen but are accompanied by a sound, it is clearly told to an operator. In this case, a speech information storage may take out and output the voice data corresponding to a key with window terminal equipment only for key information, and it may be made for the voice message from a host computer to receive a packetized voice with window terminal equipment via an ISDN network etc.
[0009]
[Example]Hereafter, the example of this invention is described in detail with reference to drawings. Drawing 1 is a block diagram of one example of the transmission-of-sound device of the window terminal of this invention. The device of a graphic display comprises the control section 11, the display 12, the keyboard 13, the passbook slip printer 14, the magnetic stripe read/writer 15, and image reader 16 grade. And in this device, it has the input check part 1, the dealings check part 2, the speech information storage 3, and the speech-information-transfer part 4 grade.
[0010]The control section 11 is connected to LAN(local area network) 10 provided within the enclosure of a financial institution. For this reason, the transmitter style 17 and the LAN board 18 are formed in the control section 11.
Communications control which followed the procedure of LAN as everyone knows is performed. The memory 21, the file control part 22, and the device control section 23 are formed in the control section 11. A memory comprises RAM, ROM, a hard disk, a floppy disk, etc., and constitutes various kinds of files for storing the data etc. which were inputted from the

transaction picture displayed on various kinds of programs and displays 12, or the keyboard 13. The file control part 22 comprises a processor etc. and controls access of these files.

[0011]The device control section 23 consists of processors etc., and controls various kinds of devices of the display 12 and keyboard 13 grade connected to the control section 11. The display 12 comprises Chinese character CRT etc. and displays a transaction picture for the operator which is a bank clerk of a window to see etc. The keyboard 13 is for an operator to perform operation about dealings.
An input result is displayed on the transaction picture of the display 12.
The passbook slip printer 14 is provided with a printhead, a print position control mechanism, etc., and prints the dealings result to the passbook and check which were kept for the customer. Magnetic stripe read / writer 15 is provided with a magnetic head etc., and performs read-out and the writing of information which were recorded on the magnetic stripe of a passbook or an operator card. The image reader 16 is provided with CCD etc. which perform the optical system and photoelectric conversion which catch an optical image, and reads character images, such as a list which the customer filled in by handwriting etc., etc.

[0012]The input check part 1 checks the data inputted from the input device of the keyboard 13 grade of a window terminal. This check is performed about the data inputted into each field which the cursor displayed on the display 12 shows. And an operator completes an entry of data in the field shown with cursor, and this check is performed when it is going to move cursor to the field which should input data next. However, since data input is completed about the last field there, this check is performed at the time of the depression of an input completion key. Although the contents of this check differ for every transaction picture displayed on the display 12, they comprise the combination of the following kinds of check.

[0013]Unless a certain data is inputted about indispensable data in dealings, that cursor should be moved to the next field confirms whether although it did not come out, the operator inputted at this time. This is called input indispensable check. It is necessary to input the data of a number etc. into all the beams of the field on the characteristic of data, and it is confirmed in this case whether the input of all the beams was performed. This is called total beam input check. Fixed correlation may be needed on dealings between the data inputted into a certain field, and the data which the operator inputted into other fields before it or the data inputted automatically. Under the present circumstances, it is confirmed whether there is any fixed correlation. This is called correlation check of data. In addition, there is a check of whether data is a negative-number value and various kinds.

[0014]An example of the transaction picture displayed on the display 12 is shown in drawing 2. The example of a graphic display is a transaction picture of the common payment of a bank. The fields 31-36, such as the number (shop tender) of a branch office, an account number, the balance at the time of pre- dealings (balance on last month), this amount of payment, a passbook or the number of printing lines to a check, and a summary, are displayed.
Among these, the fields 31 and 32, such as a shop tender and an account number, have an indispensable entry of data, and are the targets of an input indispensable check. On the other hand, the entry of data of the field 36 grade of a summary is arbitrary.

[0015]And in the input check part 1 of drawing 1, the speech information corresponding to the result of each check mentioned above is chosen. Namely, when an error etc. arise as a result of an input check, Generating of an error is not only notified, but the synthesized speech message corresponding to each check is chosen so that an operator can recognize with a sound whether they are things to depend on any, such as an error by an input indispensable check, an error by all the beam checks, and an error by a correlation check. This message is beforehand stored in the speech information storage 3 as voice data.

[0016]The dealings check part 2 checks trading conditions including the contents of record of an operator card, and chooses the speech information corresponding to the checked result. For example, the qualification of operation of an operator changes with each operators. Such qualification is decided by the limit in which it can trade, for example. That is, it is that the years of experience of the business of an operator, etc. restrict the amount of a trading limit to 1 million or less yen etc. When the result of the check by the input check part 1 mentioned above

is normal, the depression of an input completion key performs this kind of dealings check, and if it is an error, the voice message corresponding to that check will be taken out from the speech information storage 3.

[0017]The speech information storage 3 is formed in a part of memory 21 which comprises RAM etc. which were mentioned above.
The voice data based on the synthesized speech chosen by the input check part 1 and the dealings check part 2 is stored beforehand.
Each voice data is searched considering a message number etc. as a key.

[0018]The speech-information-transfer part 4 comprises a loudspeaker or headphone, the amplifying circuit that supplies an analog voice signal to these, the D/A conversion circuit which performs signal transformation from sound digital data to an analog voice signal, etc. This changes into a sound the voice data taken out from the speech information storage 3, and it transmits as a message with the sound to the operator of a window terminal. Such a speech-information-transfer part 4 can change into a sound the message added to the wording of a telegram transmitted from the upper device via LAN, and can also transmit it. Thereby, the message from an upper device is also clearly told to an operator by the sound. The message from an upper device may carry out direct reception of the packetized voice etc. via LAN, and it receives only the information used as the key of a voice message, searches the voice data of the speech information storage 3 with the control section 11 by the key, and it may be made to take it out from an upper device.

[0019]Drawing 3 is a block diagram showing the entire configuration of the system of a financial institution. Each window terminal equipment 41-45 of the business store is connected to the multimedia communication control device 46 via LAN10. This multimedia communication control device 46 is connected to the public network, the DDX network, the ISDN network, or the dedicated line 48 grade via the switchboard (PBX) 47. On the other hand, the deposit information of a financial institution, etc. are held and the host computer 49 to manage is connected to these nets. Thereby, each window terminal equipment 41-45 of a business store performs processing of transactions, performing transmission and reception of the host computer 49 and wording of a telegram.

[0020]Next, operation of the device of this invention which met the operating procedure of the common window terminal is explained. An operator inputs required data into the transaction picture shown in drawing 2 on the display 12 shown in drawing 1 from the keyboard 13. When performing entry-of-data operation, an input check is performed to the data. An input indispensable check, a total beam input check, a data correlation check, etc. are one of this check. These checks are usually defined about each transaction pictures, such as payment (drawing 2) and transfer, respectively.

[0021]In an input indispensable check, when cursor is located in the field which must input data, cursor is not moved to the next field until an operator inputs data. If an operator tends to operate a cursor key and tends to move cursor, the voice message to which an entry of data is urged will be outputted from a loudspeaker etc. For example, the sound of wording with "indispensable" data input of this field is uttered. In a total beam input check, when cursor is located in the field which must input data into all the beams, cursor is not moved to the next field until an operator inputs data into all the beams. If an operator tends to operate a cursor key and tends to move cursor at this time, the voice message to which the input of all the beams of data is urged will be outputted from a loudspeaker etc. For example, the sound of wording "in which this field has the indispensable data input of all the beams" is uttered.

[0022]In a data correlation check, when the data inputted into a certain field in other fields and the data which has a fixed relation must be inputted, cursor is not moved to the next field until an operator inputs suitable data. If an operator tends to operate a cursor key and tends to move cursor at this time, the voice message to which a suitable entry of data is urged will be outputted from a loudspeaker etc. For example, in the case of the field 34 of the amount of payment of the common payment transaction shown in drawing 2, the sound of wording, such as "please input the amount of payment below the amount of money of the front balance into this field", is uttered. When the field of the object of an input check is the field of the last in a

transaction picture, if an operator completes the entry of data to the field, the depression of the input completion key will be carried out. In this case, when an error is detected by an input check, while repealing the depression of an input completion key, the intelligible error message of "the last field has the error of what **" is outputted with a sound.

[0023]Next, at the time of the depression of the input completion key in the case of being normal, the check of a transaction content is performed for all the results of an input check. This has the check processing about information other than input data, for example, the operator card which the operator which opened the terminal inserted in the terminal unit, the operational mode of a terminal set up, etc. The maximums (1 million etc. yen etc.) of the transaction money amount which an operator can deal with are memorized by the operator card.
When trying to conduct dealings exceeding this maximum, dealings are repealed as having no qualification.
Employment screens include the screen for the processings of transactions at the window, and the screen for the internal processings of a financial institution, and it has come to be unable to perform dealings of windows on the screen for internal processings. Therefore, dealings are repealed when the data for window dealings is inputted on the screen for internal processings. In addition, whether the right page of a passbook being opened and it being inserted and a medium check are also performed. In such a dealings check, while taking out an error message applicable from the error wording table in a terminal unit, displaying on a transaction picture and telling an operator, a detailed message is taken out from the speech information storage 3, and it outputs with a sound.

[0024]On the other hand, when the result of each check mentioned above is normal, transmitted wording of a telegram is edited at transmitter guard 17, and it is transmitted to the host computer which is an upper device. And even if the case where processing of transactions becomes an error, and processing of transactions finish normally, when a certain additional information exists, a predetermined message is added to a reply telegraphic message with a host computer, and it replies to window terminal equipment. In window terminal equipment, while displaying this message on a transaction picture, a detailed message is outputted with a sound. Although the above operation is a case where an operator operates it with the directions from the customer who came to the window, this bank may have the request of transfer etc. from other banks. Also in this case, the operator can operate window terminal equipment according to directions of the sound outputted from a loudspeaker or headphone. Therefore, operation of an operator is possible, not gone to take the wording of a telegram etc. which were printed by the printer etc., and sat down. Various kinds of information in connection with dealings, including the obstacle having occurred at other banks etc., is transmitted to an operator by the sound.

[0025]Thus, even if an operator does not refer to an operations manual etc. by explanation with a sound, the operation situation of a device can be known. Therefore, using a sound, it can show around so that an operator can perform right operation, and operativity can be raised. The detailed contents of the error message displayed on the display 12 can also hear and understand the sound of a loudspeaker or headphone, and it is not necessary to refer to an operations manual etc. It becomes [in / as mentioned above / a financial institution etc.] easy to perform smooth window terminal business. This invention is not limited to the example mentioned above, and it is needless to say for various modification to be possible. For example, although the example mentioned above explained the case where office counter work of financial institutions, such as a bank, was performed, the device of this invention is applicable to various kinds of office counter works, such as office counter work of not only this but a public facility.
[0026]
[Effect of the Invention]as explained above, according to the transmission-of-sound device of the window terminal of this invention, the contents of the error are displayed with the transaction picture on a display to an operator — both, since it was made to transmit the contents with a sound, the contents of the error for an operator become clear. For example, when dealings cannot be performed at the time of cursor not moving to the next field, or the time of the depression of an input completion key, the operator can know the cause by explanation with a sound. For this reason, it can be managed even if it does not refer to an

operations manual etc. Also when wording of the error message displayed on a display is short on restrictions of a viewing area, the operator can hear a detailed error message with a sound, and don't refer to the operations manual etc. for it. Using a sound, it can show around so that an operator can perform right operation, and improvement in operativity can be aimed at. It becomes possible to carry out direct transmission of the transmission information (fault information of a system, customer sales information) generated in the routine work of a bank to an operator in real time from a high order host again, and business can be performed smoothly. It becomes [in / as mentioned above / a financial institution etc.] easy to perform smooth window terminal business.

[Translation done.]

TECHNICAL FIELD

[Industrial Application]This invention relates to the transmission-of-sound device of the window
terminal installed in financial institutions, such as a bank, etc.

[Translation done.]

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PRIOR ART

[Description of the Prior Art]The terminal unit installed in windows, such as financial institutions, such as a bank, mainly processes calculation system business, such as deposit, a money order, and a loan. In this kind of device, the operator which is a bank clerk etc. inputs required data into the transaction picture on a display from a keyboard. Whenever it performs such alter operation, a check is performed to the inputted data. Such checks are an input indispensable check, a total beam input check, a correlation check of data, etc., and differ for every transaction picture. As a result of such a check, when alter operation is not suitable, even if cursor is not moved to the next field or it presses the input completion key, measures, such as repealing the depression, are taken.
[0003]Checks other than the check of input data are also performed at the time of the depression of an input completion key. For example, they are a check of an operator card, a check of the operational mode of a terminal, etc. If there is an error as a result of this check, an error message will be displayed on the transaction picture on a display. If there is no error in the result of each above check, wording of a telegram will be transmitted to the host computer which is an upper device, but when the error on dealings, etc. arise with a host computer, a message is added to a reply telegraphic message. And in window terminal equipment, this message is displayed on the transaction picture on a display (for example, refer to the Oki Electric research and development, No. 127, Vol.52, No.3, and pp 25-30).

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[Translation done.]

EFFECT OF THE INVENTION

[Effect of the Invention]as explained above, according to the transmission-of-sound device of
the window terminal of this invention, the contents of the error are displayed with the
transaction picture on a display to an operator — both, since it was made to transmit the
contents with a sound, the contents of the error for an operator become clear. For example,
when dealings cannot be performed at the time of cursor not moving to the next field, or the
time of the depression of an input completion key, the operator can know the cause by
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on restrictions of a viewing area, the operator can hear a detailed error message with a sound,
and don't refer to the operations manual etc. for it. Using a sound, it can show around so that an
operator can perform right operation, and improvement in operativity can be aimed at. It
becomes possible to carry out direct transmission of the transmission information (fault
information of a system, customer sales information) generated in the routine work of a bank to
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TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention]However, following SUBJECT was among the Prior
arts mentioned above. That is, also in which stage of the operation mentioned above, since the
contents of the error are displayed only with the transaction picture on a display to an operator,
the contents may be indefinite for an operator. For example, when you cannot perform dealings
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institution etc. by the cause of a more than.

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* NOTICES *

MEANS

[Means for Solving the Problem]A transmission-of-sound device of a window terminal of this
invention is characterized by the following points in order to solve SUBJECT mentioned above.
(1)
** Data inputted from an input device of a window terminal is checked, and it has an input check
part which chooses speech information corresponding to the result.
** Trading conditions including the contents of record of an operator card are checked, and it
has a dealings check part which chooses speech information corresponding to the checked
result.
** It has a speech information storage which stored speech information chosen by an input
check part and dealings check part.
** It has a speech-information-transfer part which changes into a sound speech information
stored in the speech information storage concerned as a message to a window terminal, and
transmits it.
[0006]In (2) and (1), a speech-information-transfer part changes into a sound a message added
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OPERATION

[Function]
(1) In window terminal equipment, operators, such as a bank clerk, insert in a device the operator card which self possesses, and start transaction operation according to a customer's request. In this operation, the transaction picture according to a transaction content is displayed first. And required data is inputted one by one, moving cursor to each field in a transaction picture. In each field, the check of input data is performed according to movement of cursor. For example, in indispensable input data, movement of cursor is prevented until an operator inputs data. In this case, since the entry of data of the field to which cursor is pointing in this time through the sound outputted from a speech-information-transfer part is indispensable, the message of the notice of a purport which suspends movement of cursor is made. As a result, an operator grasps the operation situation of a device exactly and can perform suitable operation, without referring to a manual etc. Also when the input of all the beams in the field is required, while suspending movement of cursor similarly, the message of that a notice is made by the sound. Other input checks are also the same. After all the data is inputted normally, it confirms whether it can trade normally by a dealings check part, and if it is an error, the message with a sound will be performed like an input check.
[0008]In (2) and (1), the host computer which is an upper device decides to add a voice message to the wording of a telegram of the reply as a result of dealings, and to transmit to window terminal equipment to the wording of a telegram transmitted from window terminal equipment. And the speech-information-transfer part of window terminal equipment changes this message into a sound, and transmits it to an operator. As a result, since the contents of the error message when dealings are not normally conducted with a host computer are not limited only to the display of a screen but are accompanied by a sound, it is clearly told to an operator. In this case, a speech information storage may take out and output the voice data corresponding to a key with window terminal equipment only for key information, and it may be made for the voice message from a host computer to receive a packetized voice with window terminal equipment via an ISDN network etc.

[Translation done.]

* NOTICES *

EXAMPLE

[Example]Hereafter, the example of this invention is described in detail with reference to drawings. Drawing 1 is a block diagram of one example of the transmission-of-sound device of the window terminal of this invention. The device of a graphic display comprises the control section 11, the display 12, the keyboard 13, the passbook slip printer 14, the magnetic stripe read/writer 15, and image reader 16 grade. And in this device, it has the input check part 1, the dealings check part 2, the speech information storage 3, and the speech-information-transfer part 4 grade.

[0010]The control section 11 is connected to LAN(local area network) 10 provided within the enclosure of a financial institution. For this reason, the transmitter style 17 and the LAN board 18 are formed in the control section 11.

Communications control which followed the procedure of LAN as everyone knows is performed. The memory 21, the file control part 22, and the device control section 23 are formed in the control section 11. A memory comprises RAM, ROM, a hard disk, a floppy disk, etc., and constitutes various kinds of files for storing the data etc. which were inputted from the transaction picture displayed on various kinds of programs and displays 12, or the keyboard 13. The file control part 22 comprises a processor etc. and controls access of these files.

[0011]The device control section 23 consists of processors etc., and controls various kinds of devices of the display 12 and keyboard 13 grade connected to the control section 11. The display 12 comprises Chinese character CRT etc. and displays a transaction picture for the operator which is a bank clerk of a window to see etc. The keyboard 13 is for an operator to perform operation about dealings.

An input result is displayed on the transaction picture of the display 12.

The passbook slip printer 14 is provided with a printhead, a print position control mechanism, etc., and prints the dealings result to the passbook and check which were kept for the customer. Magnetic stripe read / writer 15 is provided with a magnetic head etc., and performs read-out and the writing of information which were recorded on the magnetic stripe of a passbook or an operator card. The image reader 16 is provided with CCD etc. which perform the optical system and photoelectric conversion which catch an optical image, and reads character images, such as a list which the customer filled in by handwriting etc., etc.

[0012]The input check part 1 checks the data inputted from the input device of the keyboard 13 grade of a window terminal. This check is performed about the data inputted into each field which the cursor displayed on the display 12 shows. And an operator completes an entry of data in the field shown with cursor, and this check is performed when it is going to move cursor to the field which should input data next. However, since data input is completed about the last field there, this check is performed at the time of the depression of an input completion key. Although the contents of this check differ for every transaction picture displayed on the display 12, they comprise the combination of the following kinds of check.

[0013]Unless a certain data is inputted about indispensable data in dealings, that cursor should be moved to the next field confirms whether although it did not come out, the operator inputted at this time. This is called input indispensable check. It is necessary to input the data of a number etc. into all the beams of the field on the characteristic of data, and it is confirmed in

this case whether the input of all the beams was performed. This is called total beam input check. Fixed correlation may be needed on dealings between the data inputted into a certain field, and the data which the operator inputted into other fields before it or the data inputted automatically. Under the present circumstances, it is confirmed whether there is any fixed correlation. This is called correlation check of data. In addition, there is a check of whether data is a negative-number value and various kinds.

[0014]An example of the transaction picture displayed on the display 12 is shown in drawing 2. The example of a graphic display is a transaction picture of the common payment of a bank. The fields 31-36, such as the number (shop tender) of a branch office, an account number, the balance at the time of pre- dealings (balance on last month), this amount of payment, a passbook or the number of printing lines to a check, and a summary, are displayed. Among these, the fields 31 and 32, such as a shop tender and an account number, have an indispensable entry of data, and are the targets of an input indispensable check. On the other hand, the entry of data of the field 36 grade of a summary is arbitrary.

[0015]And in the input check part 1 of drawing 1, the speech information corresponding to the result of each check mentioned above is chosen. Namely, when an error etc. arise as a result of an input check, Generating of an error is not only notified, but the synthesized speech message corresponding to each check is chosen so that an operator can recognize with a sound whether they are things to depend on any, such as an error by an input indispensable check, an error by all the beam checks, and an error by a correlation check. This message is beforehand stored in the speech information storage 3 as voice data.

[0016]The dealings check part 2 checks trading conditions including the contents of record of an operator card, and chooses the speech information corresponding to the checked result. For example, the qualification of operation of an operator changes with each operators. Such qualification is decided by the limit in which it can trade, for example. That is, it is that the years of experience of the business of an operator, etc. restrict the amount of a trading limit to 1 million or less yen etc. When the result of the check by the input check part 1 mentioned above is normal, the depression of an input completion key performs this kind of dealings check, and if it is an error, the voice message corresponding to that check will be taken out from the speech information storage 3.

[0017]The speech information storage 3 is formed in a part of memory 21 which comprises RAM etc. which were mentioned above. The voice data based on the synthesized speech chosen by the input check part 1 and the dealings check part 2 is stored beforehand. Each voice data is searched considering a message number etc. as a key.

[0018]The speech-information-transfer part 4 comprises a loudspeaker or headphone, the amplifying circuit that supplies an analog voice signal to these, the D/A conversion circuit which performs signal transformation from sound digital data to an analog voice signal, etc. This changes into a sound the voice data taken out from the speech information storage 3, and it transmits as a message with the sound to the operator of a window terminal. Such a speech-information-transfer part 4 can change into a sound the message added to the wording of a telegram transmitted from the upper device via LAN, and can also transmit it. Thereby, the message from an upper device is also clearly told to an operator by the sound. The message from an upper device may carry out direct reception of the packetized voice etc. via LAN, and it receives only the information used as the key of a voice message, searches the voice data of the speech information storage 3 with the control section 11 by the key, and it may be made to take it out from an upper device.

[0019]Drawing 3 is a block diagram showing the entire configuration of the system of a financial institution. Each window terminal equipment 41-45 of the business store is connected to the multimedia communication control device 46 via LAN10. This multimedia communication control device 46 is connected to the public network, the DDX network, the ISDN network, or the dedicated line 48 grade via the switchboard (PBX) 47. On the other hand, the deposit information of a financial institution, etc. are held and the host computer 49 to manage is connected to these nets. Thereby, each window terminal equipment 41-45 of a business store performs

processing of transactions, performing transmission and reception of the host computer 49 and wording of a telegram.

[0020]Next, operation of the device of this invention which met the operating procedure of the common window terminal is explained. An operator inputs required data into the transaction picture shown in drawing 2 on the display 12 shown in drawing 1 from the keyboard 13. When performing entry-of-data operation, an input check is performed to the data. An input indispensable check, a total beam input check, a data correlation check, etc. are one of this check. These checks are usually defined about each transaction pictures, such as payment (drawing 2) and transfer, respectively.

[0021]In an input indispensable check, when cursor is located in the field which must input data, cursor is not moved to the next field until an operator inputs data. If an operator tends to operate a cursor key and tends to move cursor, the voice message to which an entry of data is urged will be outputted from a loudspeaker etc. For example, the sound of wording with "indispensable" data input of this field is uttered. In a total beam input check, when cursor is located in the field which must input data into all the beams, cursor is not moved to the next field until an operator inputs data into all the beams. If an operator tends to operate a cursor key and tends to move cursor at this time, the voice message to which the input of all the beams of data is urged will be outputted from a loudspeaker etc. For example, the sound of wording "in which this field has the indispensable data input of all the beams" is uttered.

[0022]In a data correlation check, when the data inputted into a certain field in other fields and the data which has a fixed relation must be inputted, cursor is not moved to the next field until an operator inputs suitable data. If an operator tends to operate a cursor key and tends to move cursor at this time, the voice message to which a suitable entry of data is urged will be outputted from a loudspeaker etc. For example, in the case of the field 34 of the amount of payment of the common payment transaction shown in drawing 2, the sound of wording, such as "please input the amount of payment below the amount of money of the front balance into this field", is uttered. When the field of the object of an input check is the field of the last in a transaction picture, if an operator completes the entry of data to the field, the depression of the input completion key will be carried out. In this case, when an error is detected by an input check, while repealing the depression of an input completion key, the intelligible error message of "the last field has the error of what **" is outputted with a sound.

[0023]Next, at the time of the depression of the input completion key in the case of being normal, the check of a transaction content is performed for all the results of an input check. This has the check processing about information other than input data, for example, the operator card which the operator which opened the terminal inserted in the terminal unit, the operational mode of a terminal set up, etc. The maximums (1 million etc. yen etc.) of the transaction money amount which an operator can deal with are memorized by the operator card.
When trying to conduct dealings exceeding this maximum, dealings are repealed as having no qualification.
Employment screens include the screen for the processings of transactions at the window, and the screen for the internal processings of a financial institution, and it has come to be unable to perform dealings of windows on the screen for internal processings. Therefore, dealings are repealed when the data for window dealings is inputted on the screen for internal processings. In addition, whether the right page of a passbook being opened and it being inserted and a medium check are also performed. In such a dealings check, while taking out an error message applicable from the error wording table in a terminal unit, displaying on a transaction picture and telling an operator, a detailed message is taken out from the speech information storage 3, and it outputs with a sound.

[0024]On the other hand, when the result of each check mentioned above is normal, transmitted wording of a telegram is edited at transmitter guard 17, and it is transmitted to the host computer which is an upper device. And even if the case where processing of transactions becomes an error, and processing of transactions finish normally, when a certain additional information exists, a predetermined message is added to a reply telegraphic message with a host computer, and it replies to window terminal equipment. In window terminal equipment, while

displaying this message on a transaction picture, a detailed message is outputted with a sound. Although the above operation is a case where an operator operates it with the directions from the customer who came to the window, this bank may have the request of transfer etc. from other banks. Also in this case, the operator can operate window terminal equipment according to directions of the sound outputted from a loudspeaker or headphone. Therefore, operation of an operator is possible, not gone to take the wording of a telegram etc. which were printed by the printer etc., and sat down. Various kinds of information in connection with dealings, including the obstacle having occurred at other banks etc., is transmitted to an operator by the sound.
[0025]Thus, even if an operator does not refer to an operations manual etc. by explanation with a sound, the operation situation of a device can be known. Therefore, using a sound, it can show around so that an operator can perform right operation, and operativity can be raised. The detailed contents of the error message displayed on the display 12 can also hear and understand the sound of a loudspeaker or headphone, and it is not necessary to refer to an operations manual etc. It becomes [in / as mentioned above / a financial institution etc.] easy to perform smooth window terminal business. This invention is not limited to the example mentioned above, and it is needless to say for various modification to be possible. For example, although the example mentioned above explained the case where office counter work of financial institutions, such as a bank, was performed, the device of this invention is applicable to various kinds of office counter works, such as office counter work of not only this but a public facility.

[Translation done.]

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1]It is a block diagram of one example of the transmission-of-sound device of the window terminal of this invention.
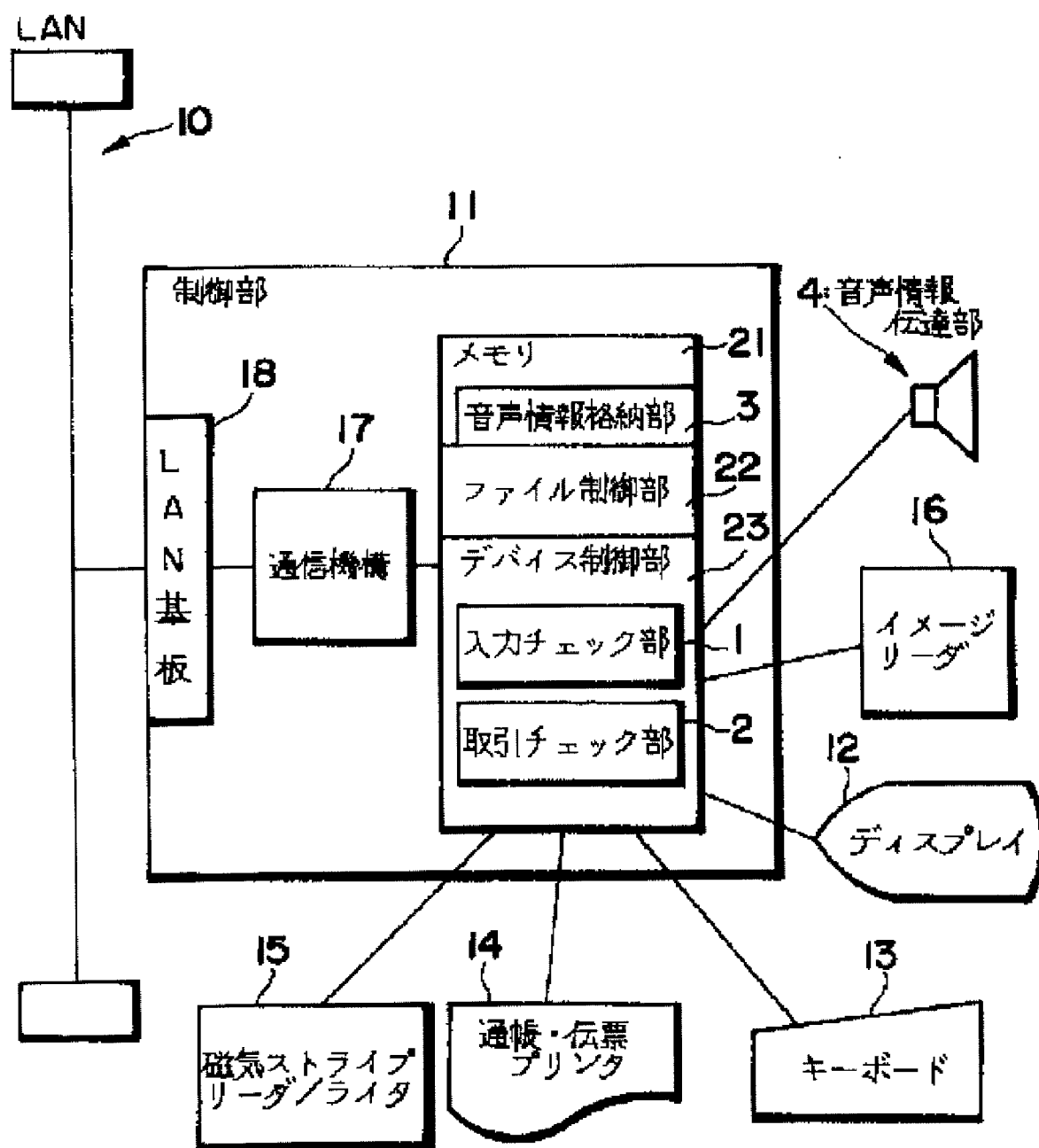[Drawing 2]It is an explanatory view of an example of a transaction picture.
[Drawing 3]It is a block diagram showing the entire configuration of the system in a financial institution.
[Description of Notations]
1 Input check part
2 Dealings check part
3 Speech information storage
4 Speech-information-transfer part
12 Display
13 Keyboard

[Translation done.]

LAN

10

11

制御部

18

LAN基板

17

通信機構

メモリ 21

音声情報格納部 3

ファイル制御部 22

デバイス制御部 23

入力チェック部 1

取引チェック部 2

4:音声情報伝達部

16

イメージリーダ

12

ディスプレイ

15

磁気ストライプリーダ/ライタ

14

通帳・伝票プリンタ

13

キーボード

本発明の窓口端末の音声伝達装置の一実施例

(51)Int.Cl.⁶		識別記号	庁内整理番号	FI		技術表示箇所
G07D	1/00	361				
G06F	3/16	340 N	9172−5E			
	19/00					
G07D	9/00	426 A				

G06F　15/ 30　　　　　　　B

審査請求　未請求　請求項の数2　FD　（全 7 頁）

(54)【発明の名称】　窓口端末の音声伝達装置

(57)【要約】

【目的】　円滑な窓口端末業務を行えるよう、操作性を向上させる。

【構成】　ディスプレイ12に表示された取引画面内の各フィールドでは、入力チェック部1によりカーソルの移動に従い、入力データのチェックが行われる。例えば、必須の入力データではオペレータがデータを入力するまでカーソルの移動が阻止される。この場合、音声情報伝達部4の音声により現在カーソルが指示しているフィールドのデータの入力が必須であるので、カーソルの移動を停止する旨の断りの伝言がなされる。また、フィールド内の全桁の入力が必要な場合も、同様にカーソルの移動を停止するとともに音声によりその旨の断りの伝言がなされる。その他の入力チェックも同様である。また、すべてのデータが正常に入力された後は、取引が正常に行えるか否かのチェックを取引チェック部2により行い、エラーであれば入力チェックと同様に音声による伝言を行う。

本発明の窓口端末の音声伝達装置の一実施例

1
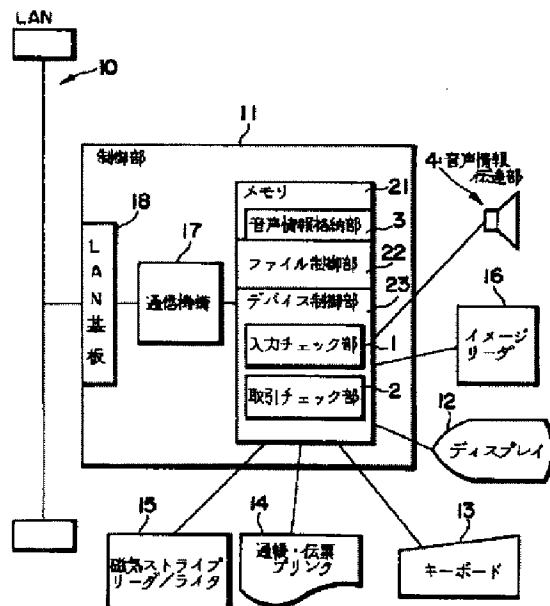
【特許請求の範囲】

【請求項1】 窓口端末の入力装置から入力されるデータをチェックし、その結果に対応した音声情報を選択する入力チェック部と、

オペレータカードの記録内容を含む取引条件をチェックし、そのチェック結果に対応した音声情報を選択する取引チェック部と、

前記入力チェック部及び取引チェック部により選択される音声情報を格納した音声情報格納部と、

当該音声情報格納部に格納された音声情報を窓口端末へのメッセージとして音声に変換して伝達する音声情報伝達部とを備えたことを特徴とする窓口端末の音声伝達装置。

【請求項2】 前記音声情報伝達部は、上位装置から送信された電文に付加されたメッセージを音声に変換して伝達することを特徴とする請求項1記載の窓口端末の音声伝達装置。

【発明の詳細な説明】

【0001】

【産業上の利用分野】本発明は、銀行等の金融機関等に設置される窓口端末の音声伝達装置に関するものである。

【0002】

【従来の技術】銀行等の金融機関等の窓口に設置される端末装置は、主に、預金・為替・融資等の勘定系業務を処理するものである。この種の装置では、銀行員等であるオペレータがディスプレイ上の取引画面にキーボードから必要なデータを入力する。このような入力操作を行う都度、入力されたデータに対してチェックが行われる。このようなチェックは、入力必須チェック、全桁入力チェック、データの相関チェックなどであり、取引画面ごとに異なる。このようなチェックの結果、入力操作が適切でないときは、カーソルを次のフィールドへ移動させないとか、あるいは入力完了キーを押下してもその押下を無効とする等の措置がとられる。

【0003】また、入力完了キーの押下時は、入力データのチェック以外のチェックも行われる。例えば、オペレータカードのチェック、端末の運用モードのチェック等である。このチェックの結果、エラーがあれば、ディスプレイ上の取引画面にエラーメッセージが表示される。更に、以上の各チェックの結果にエラーがなければ上位装置であるホストコンピュータに電文が送信されるが、ホストコンピュータで取引上のエラー等が生じたときは応答電文にメッセージが付加される。そして、窓口端末装置において、このメッセージがディスプレイ上の取引画面に表示される（例えば、沖電気研究開発、第127号、Vol.52,No.3,pp25〜30参照）。

【0004】

【発明が解決しようとする課題】しかしながら、上述した従来の技術には、次のような課題があった。即ち、上

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述した操作のいずれの段階においても、オペレータに対してはディスプレイ上の取引画面のみによりエラーの内容を表示していたので、オペレータにとってその内容が不明確な場合がある。例えば、カーソルが次のフィールドに移動しないときや入力完了キーの押下時に取引が実行できないときは、オペレータはその原因を理解することができず、操作マニュアル等を参照しなければならなかった。また、ディスプレイ上に表示されるエラーメッセージの文言は表示領域の制約上十分でない場合があり、オペレータはこの場合も操作マニュアル等を参照しなければならなかった。また、ディスプレイ上の取引画面には、オペレータが正しい操作を行えるように案内するための情報が少ないため、従来の窓口端末装置は操作性があまりよくなかった。以上の原因により金融機関等において、円滑な窓口端末業務を行うことは容易ではなかった。

【0005】

【課題を解決するための手段】本発明の窓口端末の音声伝達装置は、上述した課題を解決するため、以下の点を特徴とするものである。

（1）

①窓口端末の入力装置から入力されるデータをチェックし、その結果に対応した音声情報を選択する入力チェック部を備える。

②オペレータカードの記録内容を含む取引条件をチェックし、そのチェック結果に対応した音声情報を選択する取引チェック部を備える。

③入力チェック部及び取引チェック部により選択される音声情報を格納した音声情報格納部を備える。

④当該音声情報格納部に格納された音声情報を窓口端末へのメッセージとして音声に変換して伝達する音声情報伝達部を備える。

【0006】（2）（1）において、音声情報伝達部は、上位装置から送信された電文に付加されたメッセージを音声に変換して伝達することを特徴とする。

【0007】

【作用】

（1）窓口端末装置において、銀行員等のオペレータは、自己が所持しているオペレータカードを装置に挿入し、顧客の要請に応じて取引操作を開始する。この操作では、まず、取引内容に応じた取引画面を表示する。そして、取引画面内の各フィールドにカーソルを移動させながら、必要なデータを順次入力していく。各フィールドでは、カーソルの移動に従い、入力データのチェックが行われる。例えば、必須の入力データではオペレータがデータを入力するまでカーソルの移動が阻止される。この場合、音声情報伝達部から出力される音声を通じて現時点においてカーソルが指示しているフィールドのデータの入力が必須であるので、カーソルの移動を停止する旨の断りの伝言がなされる。この結果、オペレータは

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装置の動作状況を的確に把握し、適切な操作をマニュア
ル等を参照せずに行える。また、フィールド内の全桁の
入力が必要な場合も、同様にカーソルの移動を停止する
とともに音声によりその旨の断りの伝言がなされる。そ
の他の入力チェックも同様である。また、すべてのデー
タが正常に入力された後は、取引が正常に行えるか否か
のチェックを取引チェック部により行い、エラーであれ
ば入力チェックと同様に音声による伝言を行う。

【0008】（2）（1）において、上位装置であるホ
ストコンピュータは窓口端末装置から送信された電文に
対し、取引の結果の返信の電文に音声メッセージを付加
して窓口端末装置に送信することとする。そして、窓口
端末装置の音声情報伝達部は、このメッセージを音声に
変換してオペレータに伝達する。この結果、ホストコン
ピュータで正常に取引が行われなかったときのエラーメ
ッセージの内容が画面の表示だけに限定されず、音声を
伴うのでオペレータに明確に伝えられる。この場合、ホ
ストコンピュータからの音声メッセージはキー情報のみ
で窓口端末装置で音声情報格納部がキーに対応する音声
データを取り出して出力してもよく、また、ISDN網
等を介して音声パケットを窓口端末装置で受信するよう
にしてもよい。

【0009】
【実施例】以下、本発明の実施例を図面を参照して詳細
に説明する。図1は、本発明の窓口端末の音声伝達装置
の一実施例のブロック図である。図示の装置は、制御部
11、ディスプレイ12、キーボード13、通帳・伝票
プリンタ14、磁気ストライブリード／ライタ15、イ
メージリーダ16等から成る。そして、この装置におい
て、入力チェック部1、取引チェック部2、音声情報格
納部3、音声情報伝達部4等が備えられている。

【0010】制御部11は、金融機関の構内に設けられ
たLAN（ローカル・エリア・ネットワーク）10に接
続されている。このため、制御部11には、通信機構1
7及びLAN基板18が設けられており、周知のように
LANの手順に従った通信制御が行われる。また、制御
部11には、メモリ21、ファイル制御部22、デバイ
ス制御部23が設けられている。メモリは、RAM、R
OM、ハードディスク、フロッピディスク等から成り、
各種のプログラム及びディスプレイ12に表示される取
引画面やキーボード13から入力されたデータ等を格納
するための各種のファイルを構成する。ファイル制御部
22は、プロセッサ等から成り、これらのファイルのア
クセスを制御する。

【0011】デバイス制御部23は、プロセッサ等から
なり、制御部11に接続されたディスプレイ12、キー
ボード13等の各種のデバイスを制御する。ディスプレ
イ12は、漢字CRT等から成り、窓口の銀行員である
オペレータが見るための取引画面等を表示する。キーボ
ード13は、オペレータが取引に関する操作を行うため

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のものであり、入力結果はディスプレイ12の取引画面
に表示される。通帳・伝票プリンタ14は、印字ヘッド
や印字位置制御機構等を備え、顧客から預かった通帳や
伝票への取引結果の印字を行う。磁気ストライブリード
／ライタ15は、磁気ヘッド等を備え、通帳やオペレー
タカードの磁気ストライブに記録された情報の読み出し
及び書き込みを行う。イメージリーダ16は、光学画像
をとらえる光学系及び光電変換を行うCCD等を備え、
顧客が手書き等により記入した帳票等の文字イメージ等
を読み取るものである。

【0012】入力チェック部1は、窓口端末のキーボー
ド13等の入力装置から入力されるデータをチェックす
る。このチェックは、ディスプレイ12に表示されるカ
ーソルが示す各フィールドに入力されたデータについて
行われる。そして、オペレータがカーソルで示すフィー
ルドにデータの入力を完了し、次にデータを入力すべき
フィールドにカーソルを移動させようとするとき、この
チェックが行われる。ただし、最後のフィールドについ
てはそこでデータ入力が完了するので、入力完了キーの
押下時にこのチェックが行われる。このチェックの内容
は、ディスプレイ12に表示される取引画面ごとに異な
るものであるが、以下のような種類のチェックの組合せ
から成る。

【0013】取引において必須であるデータについて
は、何らかのデータを入力しない限り、カーソルを次の
フィールドに移動させるべきでないが、この際、オペレ
ータが入力を行ったか否かをチェックする。これを入力
必須チェックという。また、データの特性上、フィール
ドの全桁に数字等のデータを入力する必要があり、この
際、全桁の入力が行われたか否かをチェックする。これ
を全桁入力チェックという。更に、あるフィールドに入
力されたデータと、それ以前の他のフィールドにオペレ
ータが入力したデータあるいは自動的に入力されたデー
タとの間に一定の相関が取引上必要となる場合がある。
この際、一定の相関があるか否かをチェックする。これ
をデータの相関チェックという。その他、データが負の
数値でないか等の各種のチェックがある。

【0014】図2に、ディスプレイ12に表示される取
引画面の一例を示す。図示の例は、銀行の普通支払の取
引画面であり、支店の番号（店番）、口座番号、前の取
引時の残高（前残）、今回の支払額、通帳又は伝票への
印字行数、摘要等のフィールド31〜36が表示され
る。これらのうち、例えば、店番や口座番号等のフィー
ルド31、32はデータの入力が必須であり、入力必須
チェックの対象となる。一方、摘要のフィールド36等
のデータの入力は、任意である。

【0015】そして、図1の入力チェック部1では、上
述した各チェックの結果に対応した音声情報を選択す
る。即ち、入力チェックの結果、エラー等が生じたとき
は、単にエラーの発生を通知するのでなく、入力必須チ

ェックによるエラー、全桁チェックによるエラー、相関チェックによるエラー等のいずれによるものかをオペレータが音声で認識できるよう、各チェックに対応した合成音声メッセージを選択する。このメッセージは、音声データとして、音声情報格納部3に予め格納されている。

【0016】取引チェック部2は、オペレータカードの記録内容を含む取引条件をチェックし、そのチェック結果に対応した音声情報を選択する。例えば、オペレータの操作の資格は、各オペレータにより異なる。このような資格は、例えば取引可能な限度額により決まる。即ち、オペレータの業務の経験年数等により取引限度額を100万円以下に制限する等である。上述した入力チェック部1によるチェックの結果が正常であった場合、入力完了キーの押下によりこの種の取引チェックを行い、エラーであればそのチェックに対応した音声メッセージを音声情報格納部3から取り出す。

【0017】音声情報格納部3は、前述したRAM等から成るメモリ21の一部に設けられており、入力チェック部1及び取引チェック部2により選択される合成音声による音声データを予め格納している。各音声データは、メッセージ番号等をキーとして検索される。

【0018】音声情報伝達部4は、スピーカ又はヘッドフォンとこれらにアナログ音声信号を供給する増幅回路、音声ディジタルデータからアナログ音声信号への信号変換を行うD／A変換回路等から成る。これにより、音声情報格納部3から取り出された音声データを音声に変換して窓口端末のオペレータへの音声によるメッセージとして伝達する。このような音声情報伝達部4は、LANを介して上位装置から送信された電文に付加されたメッセージを音声に変換して伝達することも可能である。これにより、上位装置からのメッセージも音声によりオペレータに明確に伝えられる。尚、上位装置からのメッセージは音声パケット等をLANを介して直接受信してもよく、また、上位装置からは音声メッセージのキーとなる情報のみを受信し、そのキーにより制御部11で音声情報格納部3の音声データを検索して取り出すようにしてもよい。

【0019】図3は、金融機関のシステムの全体構成を示すブロック図である。営業店の各窓口端末装置41〜45は、LAN10を介してマルチメディア通信制御装置46に接続されている。また、このマルチメディア通信制御装置46は、交換機（PBX）47を介して公衆網、DDX網、ISDN網又は専用線48等に接続されている。一方、金融機関の預金情報等を保有し、管理するホストコンピュータ49がこれらの網に接続されている。これにより、営業店の各窓口端末装置41〜45は、ホストコンピュータ49と電文の送受信を行いつつ、取引処理を実行する。

【0020】次に、一般的な窓口端末の操作手順に沿った本発明の装置の動作を説明する。オペレータは、図1に示すディスプレイ12上の図2に示す取引画面に、キーボード13から必要なデータを入力する。データの入力操作を行っている時点で、そのデータに対して入力チェックが行われる。このチェックには、入力必須チェック、全桁入力チェック、データ相関チェックなどがある。これらのチェックは、普通支払（図2）、振込等の個々の取引画面についてそれぞれ定義されている。

【0021】入力必須チェックでは、データの入力を必ず行わなければならないフィールドにカーソルが位置しているとき、オペレータがデータを入力するまでカーソルを次のフィールドに移動させない。オペレータがカーソルキーを操作してカーソルを移動させようとすると、データの入力を促す音声メッセージがスピーカ等から出力される。例えば、「このフィールドのデータ入力は必須です。」等の文言の音声が出される。全桁入力チェックでは、全桁に必ずデータを入力しなければならないフィールドにカーソルが位置しているとき、オペレータが全桁にデータを入力するまでカーソルを次のフィールドに移動させない。このとき、オペレータがカーソルキーを操作してカーソルを移動させようとすると、データの全桁の入力を促す音声メッセージがスピーカ等から出力される。例えば、「このフィールドは全桁のデータ入力が必須です。」等の文言の音声が出される。

【0022】データ相関チェックでは、あるフィールドに他のフィールドに入力されたデータと一定の関係を有するデータを入力しなければならない場合に、オペレータが適切なデータを入力するまでカーソルを次のフィールドに移動させない。このとき、オペレータがカーソルキーを操作してカーソルを移動させようとすると、適切なデータの入力を促す音声メッセージがスピーカ等から出力される。例えば、図2に示す普通支払取引の支払額のフィールド34の場合、「このフィールドには前残高の金額以下の支払額を入力して下さい。」等の文言の音声が出される。また、入力チェックの対象のフィールドが取引画面における最後のフィールドであるときは、オペレータがそのフィールドへのデータの入力を完了すると入力完了キーを押下する。この場合、入力チェックでエラーが検出されたときは、入力完了キーの押下を無効とするとともに、「最後のフィールドに何某のエラーがあります。」等のわかりやすいエラーメッセージを音声により出力する。

【0023】次に、入力チェックの結果がすべて正常な場合の入力完了キーの押下時には、取引内容のチェックが行われる。これには、入力データ以外の情報、例えば端末を開局したオペレータが端末装置に挿入したオペレータカードや設定されている端末の運用モードなどに関するチェック処理がある。オペレータカードには、オペレータが取扱うことができる取引金額の上限（100万円等）が記憶されており、この上限を超える取引を行お

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うとするときは資格なしとして取引が無効とされる。また、運用画面には、窓口での取引処理用の画面と金融機関の内部処理用の画面とがあり、内部処理用の画面では窓口の取引ができないようになっている。従って、内部処理用の画面で窓口取引のためのデータが入力されたときは取引が無効とされる。その他、通帳の正しいページが開かれて挿入されているか等の媒体チェックも行われる。このような取引チェックでは、端末装置内にあるエラー文言テーブルから該当するエラーメッセージを取り出して取引画面に表示してオペレータに知らせるとともに、詳細なメッセージを音声情報格納部3から取り出して音声により出力する。

【0024】一方、上述した各チェックの結果が正常であった場合には、通信機構17で送信電文が編集され、上位装置であるホストコンピュータに送信される。そして、取引処理がエラーとなった場合や取引処理が正常に終っても何らかの付加情報が存在する場合には、ホストコンピュータで応答電文に所定のメッセージが付加されて窓口端末装置に返信される。窓口端末装置では、このメッセージを取引画面に表示するとともに、詳細なメッセージを音声により出力する。また、以上の操作は窓口に来た顧客からの指示によりオペレータが操作する場合であるが、他の銀行から当銀行に振込等の依頼があることがある。この場合も、オペレータはスピーカ又はヘッドフォンから出力される音声の指示に従って窓口端末装置を操作することができる。従って、オペレータはプリンタ等に印字された電文等を取りに行く必要がなく座ったままでの操作ができる。更に、他の銀行で障害が発生した等、取引に関わる各種の情報が音声によりオペレータに伝達される。

【0025】このようにして、音声による説明によりオペレータは操作マニュアル等を参照しなくても装置の動作状況を知ることができる。従って、音声を使って、オペレータが正しい操作を行えるように案内することができ、操作性を向上させることができる。また、ディスプレイ12上に表示されるエラーメッセージの詳しい内容もスピーカやヘッドフォンの音声を聞いて理解することができ、操作マニュアル等を参照する必要がない。以上のようにして、金融機関等において、円滑な窓口端末業務を行うことが容易となる。尚、本発明は上述した実施

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例に限定されるものではなく、種々の変形が可能であることはもちろんである。例えば、上述した実施例では、銀行等の金融機関の窓口業務を行う場合について説明したが、本発明の装置はこれに限らず、公共施設の窓口業務等、各種の窓口業務に適用することができる。

【0026】
【発明の効果】以上説明したように、本発明の窓口端末の音声伝達装置によれば、オペレータに対し、ディスプレイ上の取引画面によりエラーの内容を表示するともに、その内容を音声により伝達するようにしたので、オペレータにとってエラーの内容が明確になる。例えば、カーソルが次のフィールドに移動しないときや入力完了キーの押下時に取引が実行できないときは、音声による説明によりオペレータはその原因を知ることができる。このため、操作マニュアル等を参照しなくても済む。また、ディスプレイ上に表示されるエラーメッセージの文言が表示領域の制約上短くなっている場合にも、オペレータは音声により詳しいエラーメッセージを聞くことができ、操作マニュアル等を参照する必要がない。また、音声を使って、オペレータが正しい操作を行えるように案内することができ、操作性の向上を図ることができる。更にまた、銀行の通常業務中に発生する伝達情報（システムの障害情報、顧客セールス情報）を上位ホストからオペレータにリアルタイムで直接伝達することが可能になり、円滑に業務を行うことができる。以上のようにして、金融機関等において、円滑な窓口端末業務を行うことが容易となる。
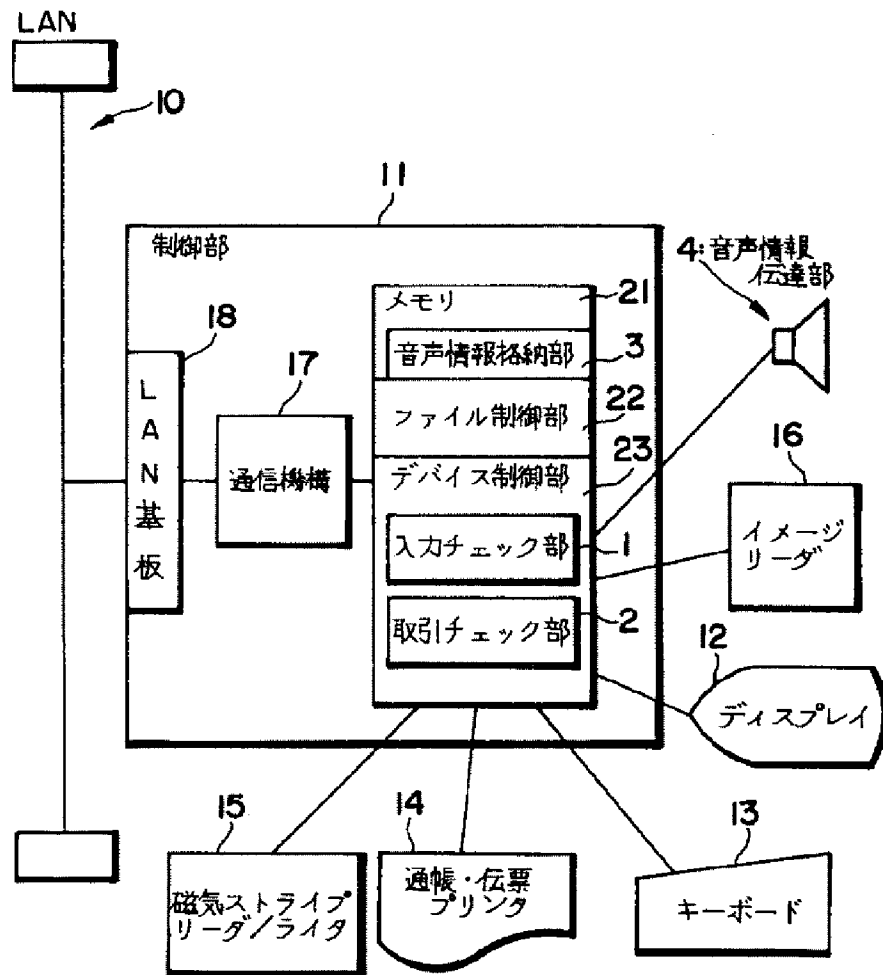
【図面の簡単な説明】
【図1】本発明の窓口端末の音声伝達装置の一実施例のブロック図である。
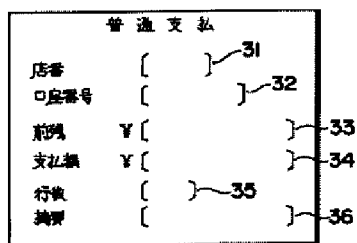【図2】取引画面の一例の説明図である。
【図3】金融機関におけるシステムの全体構成を示すブロック図である。
【符号の説明】
1　　入力チェック部
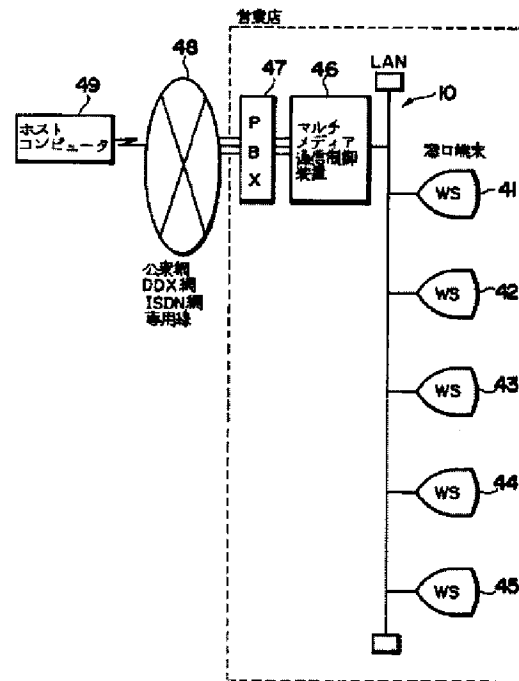2　　取引チェック部
3　　音声情報格納部
4　　音声情報伝達部
12　　ディスプレイ
13　　キーボード

【図1】

LAN

10

11

制御部

4:音声情報
伝達部

メモリ　21

音声情報格納部　3

ファイル制御部　22

デバイス制御部　23

入力チェック部　1

取引チェック部　2

18
LAN基板

17
通信機構

16
イメージ
リーダ

12
ディスプレイ

15
磁気ストライプ
リーダ／ライタ

14
通帳・伝票
プリンタ

13
キーボード

本発明の窓口端末の音声伝達装置の一実施例

【図2】

普 通 支 払

店番　〔　　　〕31
口座番号　〔　　　〕32

前残　¥〔　　　　〕33
支払額　¥〔　　　　〕34

行数　〔　　〕35
摘要　〔　　　　〕36

取引画面の一例

【図3】

金融機関におけるシステムの全体構成